



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/575,105	12/12/2006	Masayuki Kamite	289478US3 PCT	3713
22850	7590	06/18/2009	EXAMINER	
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				LEYSON, JOSEPH S
ART UNIT		PAPER NUMBER		
1791				
NOTIFICATION DATE			DELIVERY MODE	
06/18/2009			ELECTRONIC	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com  
oblonpat@oblon.com  
jgardner@oblon.com

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/575,105	KAMITE ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	JOSEPH LEYSON	1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 11 May 2009.  
 2a) This action is **FINAL**.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1 and 3-8 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1 and 3-8 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_.  
 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date \_\_\_\_\_.  
 5) Notice of Informal Patent Application  
 6) Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 11, 2009 has been entered.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kemerer et al. (US 4,128,369) in view of DeMello et al. (US 5,607,629).

Kemerer et al. (US 4,128,369) disclose an extrusion molding machine (i.e., fig. 10A), which includes a storage bin 10 to supply foam material granules (i.e., abstract; col. 14, lines 19-32) to be molded into a foam body, a cylinder (i.e., col. 14, lines 19-21) and a screw 66 to mix and transport the foam material from the storage bin 10, a mold 24, 28 provided at a cylinder front end (fig. 12), a tank 58 connected to piping 12, 14, 16, 60 that connects the storage bin 10 and the screw 66 and storing a fluid for foaming the foam material (i.e., col. 14, lines 9-18; col. 17, lines 53-68), and a heater 21-1, 21-2, 21-3, 21-4 for melting foam material and at the same time heating the foaming fluid by a plurality of stages (i.e., defined by the heaters 21-1, 21-2, 21-3, 21-4) from a base end of the cylinder near the storage bin to the front end from an initial temperature below its boiling point to a final temperature at which the foaming fluid is completely vaporized (i.e., col. 11, lines 19-57; col. 18, lines 28-56). The initial temperature of the above-mentioned heater is capable of being set as above 60°C and below 100°C, and the final temperature is capable of being set as above 160°C and below 240°C (i.e., col. 11, lines 19-57; col. 18, lines 28-56). A temperature control device 32 (i.e., fig. 11) is provided that is capable of adjusting a temperature of the mold in a range of 160°C-220°C (i.e., col. 19, line 63, to col. 20, line 3). A shearing device 50 is set up at one side of the cylinder, rotating at a certain speed to cut an extruded foam body from the cylinder. However, Kemerer et al. (US 4,128,369) does not disclose the foaming fluid being water, or a tapered section, as recited by the instant claims.

DeMello et al. (US 5,607,629) discloses an extrusion molding machine for extruding a foamable material, wherein the foaming (i.e., blowing) fluid is water (i.e., abstract), the machine including a cylinder 10, the cylinder 10 internally having a tapered section on an output end thereof adjacent to a mold 15 (i.e., fig. 1).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the foaming fluid of Kemerer et al. (US 4,128,369) to be water because it is well known in the art to use water as a foaming (i.e., blowing) agent, as disclosed by DeMello et al. (US 5,607,629); and to modify the cylinder of Kemerer et al. (US 4,128,369) to have a tapered section, as disclosed by DeMello et al. (US 5,607,629), because such a modification is well known and conventional in the art and would provide an alternative configuration for the cylinder known to be operable in the art. In this combination, since the tapered section is on an output end of the cylinder, the heater nearest the output end (i.e., 21-4 of Kemerer et al.) would heat the tapered section at the final temperature. Note that the apparatus of Kemerer et al. is capable of using the instantly claimed materials and temperatures, but such materials and temperatures relate to the intended use of the claimed apparatus. A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. *Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987); see MPEP 2114. "Expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim." *Ex parte Thibault*, 164 USPQ 666, 667

(Bd. App. 1969). Furthermore, “[i]nclusion of material or article worked upon by a structure being claimed does not impart patentability to the claims.” In re Young, 75 F.2d \*996, 25 USPQ 69 (CCPA 1935) (as restated in In re Otto, 312 F.2d 937, 136 USPQ 458, 459 (CCPA 1963)). See MPEP 2115. Furthermore, such temperatures would have been found by an artisan of ordinary skill due to routine experimentation in finding operable or optimum temperatures for processing the various materials disclosed by Kemerer et al. (US 4,128,369).

5. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kemerer et al. (US 4,128,369) in view of DeMello et al. (US 5,607,629) as applied to claims 1 and 7 above, and further in view of LeGourd (US 3,314,398).

Kemerer et al. (US 4,128,369) and DeMello et al. (US 5,607,629) disclose the apparatus substantially as claimed as mentioned above, except for the limitations of instant claims 3 and 4.

LeGourd (US 3,314,398: fig. 1; col. 2, lines 10-18) discloses a storage bin 7 including means for causing material flow in the storage bin 7 defined by a vibrating mechanism effecting intermittent vibration laterally on a side of the storage bin 7, wherein an electric motor 4 and a cam 21 is mounted on the storage bin 7 to effect vibration of the storage bin 7 by intermittently knocking the side of the storage bin 7 by the cam 21 driven by the electric motor 4.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to further modify the apparatus with an electric motor and a cam,

as disclosed by LeGourd (US 3,314,398), because such a modification would provide means for causing material flow in the storage bin.

6. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kemerer et al. (US 4,128,369) in view of DeMello et al. (US 5,607,629) as applied to claims 1 and 7 above, and further in view of Hayashi et al. (US 4,548,775).

Kemerer et al. (US 4,128,369) and DeMello et al. (US 5,607,629) disclose the apparatus substantially as claimed as mentioned above, except for the limitations of instant claims 5 and 6.

Hayashi et al. (US 4,548,775) disclose an extrusion molding machine (i.e., fig. 1) including a mold (i.e., 2, 3, 4) provided with multiple apertures 31 for production of a fused product (i.e., figs. 3 and 6; col. 1, lines 5-22), and the multiple apertures 31 being dispersively arranged so that triangles defined by three neighboring apertures of the multiple apertures assume an equal shape, wherein the multiple apertures have a circular shape, and a diameter of the multiple apertures is 1.8 mm in diameter (i.e., fig. 4; col. 11, lines 14-16).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to further modify the apparatus with the mold of Hayashi et al. (US 4,548,775) because such a modification would enable production of a fused product.

7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kemerer et al. (US 4,128,369) in view of DeMello et al. (US 5,607,629) as applied to claims 1 and 7 above, and further in view of Flarup-Knudsen (US 6,531,077).

Kemerer et al. (US 4,128,369) and DeMello et al. (US 5,607,629) disclose the apparatus substantially as claimed as mentioned above, except for the limitations of instant claim 8.

Flarup-Knudsen (US 6,531,077) disclose an extrusion molding machine for producing pellet product (i.e., fig. 1) including a cylinder 2 internally having a tapered section at an output end thereof, a shearing device 8, 12, 14 set up at one side of the cylinder, rotating at a certain speed to cut an extruded body from the cylinder 2, the tapered section being adjacent to the shearing device.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to further modify the apparatus with a shearing device adjacent a tapered section of the cylinder, as disclosed by Flarup-Knudsen (US 6,531,077), because such a modification would enable a different product to be produced, namely a pellet product.

#### ***Response to Arguments***

8. Applicant's arguments with respect to the instant claims have been considered but are moot in view of the new ground(s) of rejection.

Applicants argue that that Kemerer does not disclose that the individual heaters 21-1 through 21-4 should have different individual heat outputs; that, thus, Kemerer does recognize the individual heat outputs with respect to one another as a result effective variable capable of being optimized; and that, accordingly, a person of ordinary skill in the art, without the impermissible hindsight bias from reading the present application, would not find it obvious to optimize the heaters 21-1 through 21-4 of

Kemerer to achieve the claimed temperature ranges. The examiner respectfully disagrees. Kemerer discloses that a control panel 150 includes switches for manually turning on or off the electrical power being supplied to the heaters 21-1 to 21-4 for regulating their individual heat outputs (col. 18, lines 48-52). Clearly, Kemerer teaches that the heaters are capable of different individual heat outputs. For example, if one heater is turned off and another heater is turned on, the heat output is clearly different for each heater. Kemerer further discloses that automatic temperature controllers can be included for maintaining the temperature levels desired to accurately control the temperature of the extrusion material as it is fed forward by the screw (col. 18, lines 52-56). Note the word “desired” above clearly shows that temperature is a variable capable of being optimized, and no hindsight was used by the examiner.

***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOSEPH LEYSON whose telephone number is (571)272-5061. The examiner can normally be reached on M-F 9AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gupta Yogendra can be reached on (571) 272-1316. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Robert B. Davis/  
Primary Examiner, Art Unit 1791

/J. L./  
Examiner, Art Unit 1791